

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE SPECIFICATION

The specification has been amended to correct some minor informalities of which the undersigned has become aware, including all of the informalities pointed out by the Examiner. No new matter has been added, and it is respectfully requested that the amendments to the specification be approved and entered and that the objection to the specification be withdrawn.

THE DRAWINGS

Figs. 2 and 3 have been amended to show that the combination of the absorbent body 10 and the top sheet 11 constitute the core 3, as required by the Examiner. And Figs. 7A, 7B and 7C have been amended to remove the text therein, as required by the Examiner. Submitted herewith are corrected sheets of formal drawings that incorporate the amendments and annotated sheets showing the changes made thereto. No new matter has been added, and it is respectfully requested that the Examiner's objection to the drawings be withdrawn.

THE CLAIMS

Claim 1 has been amended to recite that the absorbent body has a front surface side and comprises a first layer of pulp fibers, a second layer of pulp fibers and super absorbent polymer and a third layer of pulp fibers such that the super absorbent polymer is only in the second layer, as well as to recite that the first, second and third layers are laminated in order from the front surface side such that the second layer is between the first and third layers, and that a content of the super absorbent polymer in the second layer of the absorbent body is not less than 55% by weight of the absorbent body. In addition, claim 1 has also been amended to recite that the second layer of the absorbent body is thicker than both the first layer of the absorbent body and the third layer of the absorbent body, that the total thickness of the absorbent article is 5 mm or less, and that a moisture absorbing blocking rate of the super absorbent polymer is 50% or less.

Claim 4 has been amended to recite that the top sheet is a single sheet and has an overlapping portion at a center of the front surface side of the absorbent body, and that both surfaces of the non-woven fabric in the top sheet are subjected to a hydrophilic treatment.

And claim 5 has been amended to remove the feature of the super absorbent polymer having a moisture absorbing blocking rate

of 50% or less, which feature is now recited in amended independent claim 1 from which claim 5 depends.

No new matter has been added, and it is respectfully requested that the amendments to the claims be approved and entered.

THE PRIOR ART REJECTION

Claims 1, 4, 8, 13 and 14 were rejected under 35 USC 102 as being anticipated by WO 99/53877 ("Fuchs et al"); claims 1, 7, 8, 13 and 14 were rejected under 35 USC 103 as being obvious in view of the combination of Fuchs et al and USP 5,458,592 ("Abuto et al"); claims 5 and 6 were rejected under 35 USC 103 as being obvious over Fuchs et al alone, or in combination with Abuto et al; and claims 9-12 were rejected under 35 USC 103 as being obvious over Fuchs et al, alone, or in combination with Abuto et al, USP 5,098,423 ("Pieniak et al") and USP H0,001,750 ("Dobrin"). These rejections, however, are respectfully traversed with respect to the claims as amended hereinabove.

According to the present invention recited in amended independent claim 1, an absorbent article is provided which comprises an absorbent body having a front surface side and a first layer of pulp fibers, a second layer of pulp fibers and super absorbent polymer and a third layer of pulp fibers such that the super absorbent polymer is only in the second layer,

wherein the first, second and third layers are laminated in order from the front surface side such that the second layer is between the first and third layers. As recited in amended independent claim 1, the absorbent article further comprises a liquid-permeable top sheet including a non-woven fabric which covers the absorbent body, a liquid-permeable upper sheet, and a liquid-impermeable lower sheet, wherein the top sheet and the absorbent body are situated between the liquid-permeable upper sheet and the liquid-impermeable lower sheet. As recited in amended independent claim 1, moreover, the absorbent body contains 55% or more of super absorbent polymer by weight, the second layer of the absorbent body is thicker than both the first layer of the absorbent body and the third layer of the absorbent body, the total thickness of the absorbent article is 5 mm or less, and a moisture absorbing blocking rate of the super absorbent polymer is 50% or less.

With this structure, the present invention solves particular problems of absorbent articles. Specifically, when the amount of super absorbent polymers is increased in an absorbent body of an absorbent article, there has been a problem of wearability, in other words, the surface of the absorbent body feels rigid and the polymeric particle feels rough. Furthermore, when distribution of the polymer in the absorbent body is not even and

is even slightly unbalanced, a top sheet of non-woven fabric that is wrapped around the absorbent body is torn in compression.

To solve these problems, in conventional absorbent articles, the amount of pulp fiber was increased and the ratio of the super absorbent polymers to pulp fibers was reduced. Unfortunately, with such absorbent body, the thickness could not be made sufficiently thin.

However, with the structure of the present invention as recited in amended independent claim 1, even though the absorbent body contains 55% by weight or more of super absorbent polymer, since the first, upper layer and the second, lower layer of the absorbent body are each layers of only pulp fiber and the absorbent body is wrapped in a top sheet including non-woven fabric, the above-described problems of rigid and rough feel and tear of the top sheet of non-woven fabric wrapped around the absorbent body are eliminated.

Also, with the structure of the present invention as recited in amended independent claim 1, since the super absorbent polymer is mixed only in the second, middle layer of the absorbent body, the second, middle layer contains more than 55% by weight of super absorbent polymer, relative to the entire absorbent body. Conventionally, an absorbent body containing such a large amount of super absorbent polymer did not function sufficiently. However, because the thickness of the first and third pulp fiber

layers are each relatively thin and the total thickness of the absorbent article is 5 mm or less, the ratio of pulp to super absorbent polymer in the second mixed layer may be maintained as high as possible so that the super absorbent polymer functions appropriately.

Still further, with the structure of the present invention as recited in amended independent claim 1, since super absorbent polymer with a moisture absorbing blocking rate of 50% or less is used, even if the super absorbent polymer is included in the absorbent body at a high ratio relative to the pulp fibers, super absorbent polymers that absorb moisture do not stick to each other and thus liquid permeation and absorption are not interfered with and therefore do not reduce the absorption capability of the absorbent body.

The above described combination of structural features recited in amended independent claim 1 provides an absorbent article that is thinner than conventional absorbent articles and has better absorption capabilities.

And it is respectfully submitted that the prior art cited by the Examiner do not disclose, teach or suggest an absorbent article having the above described combination of structural features recited in amended independent claim 1.

In particular, it is respectfully pointed out that Fuchs et al, Abuto, Pieniak et al and Dobrin do not disclose an absorbent

body including a first layer of pulp fibers, a second layer of pulp fibers and super absorbent polymer and a third layer of pulp fibers, wherein the first, second and third layers are laminated in order from a front surface side such that the second layer is between the first and third layers, and with these layers having the additional properties recited in amended independent claim 1. These cited prior art references, therefore, cannot achieve the above described advantageous effects achieved by the absorbent article of the present invention as recited in amended independent claim 1.

In addition, it is respectfully submitted that the cited prior art references do not disclose the feature of the present invention as recited in claim 4 whereby the top sheet is a single sheet and has an overlapping portion at a center of the front surface side of the absorbent body and both surfaces of the non-woven fabric in the top sheet are subjected to a hydrophilic treatment. This particular structure recited in claim 4 provides significant advantages, including preventing spill of the super absorbent polymer, enhancing the strength of the overlapping portion and ensuring sufficient permeability of liquids of the overlapping portion.

In view of the foregoing, it is respectfully submitted that the present invention as recited in amended independent claim 1 and claims 4, 5 and 8-14 depending therefrom clearly patentably

distinguishes over the cited references, taken singly or in any combination, under 35 USC 102 as well as under 35 USC 103.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,

/Douglas Holtz/

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